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10/652,004	08/29/2003	Darwin Mitchel Hanks	200209012-1	9904

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FORT COLLINS, CO 80527-2400

EXAMINER

GOMA, TAWFIK A

ART UNIT PAPER NUMBER

2627

NOTIFICATION DATE DELIVERY MODE

02/07/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	Application No. 10/652,004	Applicant(s) HANKS, DARWIN MITCHEL	
	Examiner Tawfik Goma	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-18 and 25-29 is/are pending in the application.
- 4a) Of the above claim(s) 25-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This action is in response to the amendment filed on 6/18/2007.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4, 6, 10 and 18 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Okubo et al (US 4336597) in view of Nagao et al (US 2001/0028964) and further in view of Tateishi (US 5086421).

Regarding claim 1, Okubo discloses a method of focus control, comprising: passing a light source beam over a reflectivity change on a storage media (col. 2 lines 8-15)); determining a change time of a reflectivity step function (col. 2 lines 51-64 and fig. 2c); determining a current light source spot size using the change time and a clock frequency (col. 2 lines 51-68); and adjusting a focus actuator to achieve a desired spot size based on the current light source spot size (col. 3 lines 10-30). Okubo fails to disclose wherein the storage medium is a rotating optical storage medium. Okubo discloses that the method is used by moving an electron beam, which can be used in lithography. In the same field of endeavor, Nagao discloses a method of using an electron beam or an optical beam with a rotating medium for lithography (pars. 11, 14 and par. 56). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of focusing of Okubo by applying it to a rotating optical medium. The rationale is as follows: One of ordinary skill in the art at the time of the

applicant's invention would have applied the focusing technique to a rotated optical medium as it would have been a simple substitution of applying a known method used in a similar device which would yield predictable results.

Further regarding claim 1, Okubo in view of Nagao fail to disclose wherein the frequency used for the clock to determine the spot size is a storage media velocity. In the same field of endeavor, Tateishi discloses adjusting a clock frequency to the velocity of the recording medium (col. 4 lines 8-15 and col. 5 lines 45-64). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the focus control method disclosed by Okubo in view of Nagao by determining the spot size using a clock frequency corresponding to a storage media velocity. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to use a storage media velocity in order to have a proper RF reproduction signal while the storage media velocity is changed (Tateishi, col. 5 lines 60-64).

Regarding claim 3, Okubo further discloses wherein the reflectivity step function is derived from the output of at least one photo sensor (9, fig. 1).

Regarding claim 4, Okubo further discloses wherein the change time comprises a photo sensor output rise time (fig. 2c).

Regarding claim 6, Okubo fails to disclose wherein passing the light source beam over the reflectivity change on the storage media comprises moving the storage media with respect to the light source beam, while holding the light source beam stationary; and the storage media velocity is the velocity of the storage media relative to the light source beam. Tateishi discloses wherein the velocity is a relative velocity (CLV and col. 3 lines 20-30) and wherein the relative

velocity is when a light source is stationary and a media moved (2, 3, fig. 3 and col. 2 lines 60-62). It would have been obvious to move the media and not the light source. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to move the media and not the light source in order to reproduce a disc shaped recording medium.

Regarding claim 10, Okubo further discloses wherein the reflectivity change on the storage media comprises a change from a lower reflectivity to a higher reflectivity (fig. 2c)

Regarding claim 18, Okubo fails to discloses wherein the storage media is selected from the group consisting of a compact disc and a digital versatile disc. Tateishi discloses reproducing a compact disc (col. 1 lines 53-65). It would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to apply the method to a compact disc. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention to a compact disc in order to use a high density recording medium.

Claims 5 and 9, claims 5 and 9 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Okubo et al (US 4336597) in view of Tateishi (US 5086421) and further in view of Greene et al (US 5805460).

Regarding claim 5, Okubo fails to disclose wherein the change time comprises a photo sensor output fall time. In the same field of endeavor, Greene discloses a method a measuring an RF signal fall time (fig. 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method by measuring a fall time. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have

been motivated to use a fall time as an equivalent alternative for measuring the signal response to a reflectivity change.

Regarding claim 9, Okubo fails to disclose wherein the reflectivity change used for the measurement on the storage media comprises a change from a higher reflectivity to a lower reflectivity. Greene discloses measuring a fall time of an RF signal (fig. 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method by measuring a fall time that results from a higher reflectivity to a lower reflectivity change. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to use a fall time from a higher reflectivity to a lower reflectivity as an equivalent alternative for measuring the signal response to a reflectivity change.

Claims 7 and 8, are rejected under 35 U.S.C. 103 (a) as being unpatentable over Okubo et al (US 4336597) in view of Nagao et al (US 2001/0028964) and Tateishi (US 5086421) and further in view of Further in view of Suzuki (US 4922351).

Regarding claim 7, Okubo further discloses wherein: passing the light source beam over the reflectivity change on the storage media comprises moving the light source beam with respect to the storage media, while holding the storage media stationary. Tateishi discloses wherein the velocity is a relative velocity (CLV and col. 3 lines 20-30) but fails to disclose wherein the relative velocity is when a light source is moved and a media is held stationary. In the same field of endeavor, Suzuki discloses a relative velocity wherein the head is moved and the medium is held stationary (col. 5 lines 25-41). It would have been obvious to one of ordinary skill in the art to modify the method disclosed by Okubo in view of Nagao and Tateishi by moving the head while keeping the media stationary as taught by Suzuki. The rationale is as

follows: One of ordinary skill in the art would have been motivated to move the head in order to reproduce an optical card shaped medium.

Regarding claim 8, Tateishi discloses wherein the velocity is a relative velocity (CLV and col. 3 lines 20-30) but fails to disclose wherein the relative velocity is when a light source is moved and a media is also moved. In the same field of endeavor, Suzuki discloses a relative velocity wherein the head is moved and the medium is moved, (fig. 7 and col. 6 lines 10-57). It would have been obvious to one of ordinary skill in the art to modify the method disclosed by Okubo in view of Nagao and Tateishi by moving the head and the media as taught by Suzuki. The rationale is as follows: One of ordinary skill in the art would have been motivated to move the head and the media in order to reproduce an optical card shaped medium.

Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al (US 4336597) in view of Nagao et al (US 2001/0028964) and Tateishi (US 5086421), and further in view of Ito et al (US 5608717).

Regarding claims 11-13, Okubo in view of Nagao and Tateishi disclose everything claimed as applied above (see claim 1). Okubo fails to disclose wherein the reflectivity change on the storage media comprises a bar, a stripe and a checkerboard pattern in a label layer of the storage media. In the same field of endeavor, Ito discloses wherein a reflectivity change on a storage medium can be any graphical pattern on a label (col. 10 lines 12-19 and 14, fig. 1 and fig. 16). It would have been obvious to one of ordinary skill in the art to modify the recording medium disclosed by Okubo by using a label with a graphical pattern as taught by Ito. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention

would have been motivated to provide a graphical pattern on a label in order to present a logo and to prevent illegal copying of a disk (fig. 1 and col.10 lines 6-19).

Regarding claims 14-16, Okubo in view of Nagao and Tateishi disclose everything claimed as applied above (see claim 1). Okubo fails to disclose wherein the reflectivity change on the storage media comprises a bar, a stripe and a checkerboard pattern in a data layer of the storage media. In the same field of endeavor, Ito discloses wherein a reflectivity change on a storage medium can be any graphical pattern on a data layer (col. 10 lines 17-23 and 14, fig. 1 and fig. 16). It would have been obvious to one of ordinary skill in the art to modify the recording medium disclosed by Okubo by using a data layer with a graphical pattern as taught by Ito. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide a graphical pattern on a data layer in order to prevent it more difficult to recreate the copy protection information (fig. 1 and col.10 lines 17-23)

Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al (US 4336597) in view of Nagao et al (US 2001/0028964) and Tateishi (US 5086421) and further in view of Anderson et al (US 2003/0179674)

Regarding claim 17, Okubo in view of Nagao and Tateishi disclose everything claimed as applied above (see claim 1). Okubo fails to disclose wherein passing the light source beam over a reflectivity change on the storage media comprises passing the light source beam from a label side of the storage media over the reflectivity change on the storage media. In the same filed of endeavor, Anderson discloses passing a light source over a label layer from the label side (fig. 5 and par. 32). It would have been obvious to one of ordinary skill in the art to modify the



method disclosed by Okubo in view of Nagao and Tateishi by passing the light source over a label layer as taught by Anderson. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to focus on a label layer of a disk in order to read copy protection and discrimination information recorded on the label layer.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 3-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tawfik Goma/  
1/31/2008

/William Korzuch/  
SPE, Art Unit 2627